

ABSTRACT

A turbo decoder having two modes of operation decodes received information as per an N-state Radix-K trellis where N and K are integers equal to 1 or greater. The
5 turbo decoder uses an in-line addressing technique that allows it to operate as a Serial Convolutional Code decoder in the first mode of operation and a Parallel Convolutional Code decoder in the second mode of operation. The decoder uses an in line addressing technique that allows it to use the same block of memory to store and retrieve states of the trellis as it processes received information. The turbo decoder can also operate as per
10 an N-state Radix-K trellis where N is an integer equal to 2 or greater and K is an integer equal to 4 or greater.